

Thus, Applicant reasserts the arguments provided in his previous response, dated January 21, 2003. However, the Applicant responds to the Examiner's Arguments provided in the April 3, 2003 Office Action in the paragraphs below.

2. Response to Examiner's Arguments

a.) As pointed out in the Applicant's last response, the Applicant pointed out that neither Hollier, Malvar, Di Pietro, nor Chen, whether taken alone, or in combination, teach, suggest or disclose a processor operative calculate a solution to at least one empirically derived mathematical function by using the at least one measured characteristic as an independent variable in the at least one empirically derived mathematical function, whereby the solution is an estimate of likely user perception of the quality of the telephonic voice connection, as recited in claim 1. The Examiner disagrees and asserts that Malvar teaches the elements missing from Hollier. Specifically, the Examiner argues that Malvar teaches "parametric modeling for a PDF of the quantized and run length encoded transform coefficients."

In the Applicant's last response, Applicant agrees that indeed Malvar teaches the use of "statistical modeling used to perform entropy encoding using a modified Laplacian-exponential probability density function (PDF) for the run-length encoding (See 18, line 50 - column 19, line 62)." In the Applicant's last response, the Applicant also pointed out that the Laplacian-exponential PDF model is controlled by the parameter A (See column 19, line 38-39), which is defined as the maximum value of a fixed block (See column 18, lines 23-49). Therefore, the parameter A is not a measured characteristic of a telephonic voice connection and the Laplacian-exponential PDF model is not employed to approximate user perception of the quality of a voice connection. The Examiner also mentions the fact that Malvar uses a Bark scale. Malvar teaches that a Bark scale is a quasi-logarithmic scale that segments human hearing response by approximate frequency bands. The Examiner fails to explain why the Bark scale is relevant to the language recited in claim 1.

As the Applicant has tried to point out for the last two responses, even if everything the Examiner says about Malvar is true, Malvar does not supply the missing features because Malvar is directed to solving an entirely different problem. Essentially, Malvar is directed to using a PDF to encode a signal. As the Applicant has repeatedly pointed out, Malvar simply has no relevance to the task of calculating a solution to at least one empirically derived mathematical function by using the at least one measured characteristic as an independent

variable in the at least one empirically derived mathematically function, whereby the solution is an estimate of likely user perception of the quality of the telephonic voice connection, as recited in claim 1.

b.) The Examiner states that Applicant contends that “Malvar does not employ a probability distribution function that approximates user perception of the quality of voice connection.” The Examiner further argues that Malvar does not have to have a PDF because the Applicant’s claim is silent with respect to employing a PDF. First, while the Applicant agrees that the claim does not recite the use of a PDF, the Examiner misses the point. What the Applicant argued, and continues to argue, is that Malvar does not employ any function, including a probability distribution function, that approximates *the user perception of the quality of a voice connection*. The Applicant has pointed out, and continues to point out, that Malvar is directed to coding/decoding, and does not provide any solution to the problem of estimating the quality of a voice connection.

The Examiner also states that “Applicant cannot deny the fact that Malvar indeed focuses on a codec system.” The Applicant has never denied this, and in fact, has agreed with this statement, and continues to agree with it. Applicant agreed that this was so in the last response. Applicant’s point is that the present invention is not concerned with the encoding/decoding process. Applicant’s invention is directed to estimating the quality of a voice connection.

c.) The Examiner argues that Di Pietro teaches a processor operative to calculate a solution to at least one empirically derived function. To back up this assertion, the Examiner states that Di Pietro uses a non-linear function having “x” in the argument. He also states that Di Pietro discloses a bark scale. He asserts that since the Bark scale is based on the physiology of the human ear, “it is therefore an appropriate basis for defining characteristic values.”

First, the Applicant pointed out that in the last response, that Di Pietro teaches a method for rating the transmission quality by feeding differential data into a neural network. The Applicant agrees that Di Pietro uses a non-linear function. Each node in the neural network is modeled as a non-linear function. This true for all neural networks. However, the Examiner does not explain why this is relevant to the language of claim 1. Neural networks typically employ hundreds of nodes. However, claim 1 does not recite the use of neural networks, nor does it recite the use of at least one non-linear equation. Second, the Examiner has not explained why the Bark scale is relevant. The Bark scale divides human hearing into

frequency bands. The Applicant is at a loss in trying to understand what this subject matter has to do with the language of the claims.

d.) The Examiner essentially states that Chen is relevant and the Applicant's arguments are irrelevant because the claims do not "exclude and/or include the Gaussian distributions." In another attempt to clarify the Applicant's argument, Applicant points out that claim 1 recites "at least one empirically derived mathematical function." Applicant also points out again that Chen employs a Gaussian distribution. In his last response, the Applicant cited a well known text book that points out that the Gaussian distribution is not an empirically derived function. Thus, Applicant concluded in his last response, that Chen cannot be relevant to the claims at issue because Chen does not teach or suggest the use of "at least one empirically derived mathematical function" to obtain an estimate of likely user perception. The argument is that simple. Applicant also pointed out in his last response, that Chen is directed to detecting zero rate frames, and is not directed to the problem of estimating voice quality.

e.) The Examiner states that he disagrees with the Applicant's contention that none of the references teach the use of PDFs. Yet again the Applicant states that this is not the point the Applicant is trying to make - Applicant reminds the Examiner that the use of PDFs is beside the point. As noted above, none of the cited references, whether taken alone or in combination, disclose, teach, or suggest: 1) a processor that calculates a solution to at least one empirically derived mathematical function; 2) that the at least one empirically derived mathematical function uses the at least one measured characteristic as an independent variable in the at least one empirically derived mathematical function; and 3) whereby the solution of the at least one empirically derived mathematical function is an estimate of likely user perception of the quality of the telephonic voice connection.

f. – j.) As pointed out in the last response, the Examiner provides no independent analysis for each of the independent claims. In response, the Examiner disagrees, but then explains that these claims are nothing more than a new combination of previously rejected claims. The Applicant makes three points in response. First, the Applicant takes the Examiner's comments to mean that, in fact, the Examiner has not provided an independent analysis for each claim as is required. Second, It is well settled that every claim is *a new combination of old elements*. In light of point number two, and as pointed out in the last response, each independent claim has a different scope and is worthy of an independent analysis. For example, as pointed out above and in the last response, claim 29 is directed to a

programmable device that includes a memory, a processor, and an interface circuit. The issues regarding the processor have been discussed, but the Examiner has not pointed out which reference teaches a programmable device and/or an interface circuit. Claim 39 is a method for fabricating a device. As pointed out above and in the last response, the Examiner has failed to point out where the cited references teach each step recited by claim 39. The Applicant has pointed out this deficiency for each independent claim. Essentially, the Examiner makes a series of conclusory statements as to why he should not have to examine every claim. The Applicant respectfully points out that it is the Examiner's duty to examine every claim.

k.) The Applicant pointed out in the last response, that there is no suggestion or motivation to combine the references. The Applicant has provided a very detailed analysis regarding this point.

In response, the Examiner copies portions of paragraphs a, c, and d of his response and then repeats his motivational statement. Once again, the Examiner states that he disagrees and then repeats his previous assertions. There never seems to be any direct response to any of the points being made by the Applicant. Once again, as pointed out in the last response, and in the analysis provided above, the Examiner has failed to point out where the above motivational statement can be found, either in the references themselves, or in the knowledge generally available to those of ordinary skill in the art. There is no objective teaching in the cited prior art that would an individual to combine the cited references in the manner asserted by the Examiner. Repeating paragraphs a, c, and d does not answer the question as to why someone skilled in the art would use Malvar's codec with Hollier's method for testing the quality of a voice signal. Similarly, the Examiner never responds to the Applicant's request for an explanation as to why someone skilled in the art would combine Chen's apparatus for detecting zero rate frames with Hollier's method for testing the quality of a voice signal. Further, there is no reason provided by the Examiner that would lead one to conclude that someone of ordinary skill would be motivated to combine Di Pietro's neural network with Hollier's device. As a final note, the Applicant again points out that the meaning of the Examiner's reasons for combining the references is not understandable, and the statement appears to be motivated by hindsight.

The Examiner failed to point out the relevance of U.S. Patent No. 5,715,372 to Meyers et al.

Under this paragraph, the Examiner asserts in summary fashion that "the Examiner even provided Applicant's with addition reference that read on Applicant's general claim language." Applicant respectfully submits that this is an improper statement, and should be withdrawn. The Examiner owes a duty to specifically point out the grounds for rejection. 35 U.S.C. §132. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. 37 C.F.R. §1.104(c)(2). Applicant respectfully submits that the Examiner has failed to meet his obligations and request that the Examiner affirmatively withdraw this ambiguous statement.

Applicant assumes that the Examiner is attempting to make a rejection under either 35 U.S.C. §102 or 35 U.S.C. §103, however, which is unclear. Applicant's submit that in either event the Examiner has failed to establish either a prima facie case of anticipation or obviousness.

3. Conclusion

Based upon the remarks and papers of record, Applicant believes the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicant respectfully requests reconsideration of the pending claims 1-61 and a prompt Notice of Allowance thereon.

Applicant believes that no extension of time is necessary to make this Response timely. Should Applicant be in error, Applicant respectfully requests that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Response timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of WorldCom, Deposit Account **13-2491**.

Please direct any questions or comments to Daniel P. Malley at (607) 256-7307.

Respectfully submitted,

WALL MARJMA & BILINSKI



Daniel P. Malley

Registration No. 43,443

WALL MARJMA & BILINSKI

101 S. Salina Street

Suite 400

Syracuse, NY 13202

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I hereby certify that this correspondence is being deposited with the United States Postal Services as Express Mail Label No. EV183732729US addressed to Assistant Commissioner for Patents, Washington D.C. 20231, on June 13, 2003.


Lynn L. Pond